

REMARKS/ARGUMENT

Claims 1, 2 and 4-59 are pending. Claims 18, 33-35 and 38 have been amended to correct minor informalities without narrowing the claims. Claims 33-35 and 38 in particular are being amended to remove an extra comma that resulted from earlier amendments. Claims 1, 31, 40, 43, 45 and 58 are the independent claims.

Applicants note with appreciation the allowance of claims 40-44, 58 and 59.

Claim 18 was objected to due to an informality. That claim has been amended in the manner suggested by the Examiner, obviating the objection.

Claims 1 and 17 were rejected under 35 U.S.C. § 103 over U.S. Patent 5,598,430 (Hachisuka et al.) in view of U.S. Patent 6,091,343 (Dykema et al.) Claim 2 was rejected under 35 U.S.C. § 103 over Hachisuka et al. in view of Dykema et al. and further in view of U.S. Patent 5,289,252 (Nourrcier). Claims 31 and 45 were rejected under 35 U.S.C. § 103 over Hachisuka et al. in view of Nourrcier.

Independent claim 1 recites, inter alia, analog modulation type discrimination means for, in a case where the reception signal is discriminated to be a signal of the analog modulation type, receiving the discriminated reception signal and discriminating whether the discriminated reception signal is an AM signal or an FM signal.

Hachisuka et al. is cited as teaching a receiver that discriminates whether the modulation type of a reception signal is of the analog modulation type or of the digital modulation type. However, no teaching or suggestion has been found in Hachisuka of, inter alia, the analog type discrimination means of claim 1. In an attempt to overcome this deficiency, the Examiner relied upon Dykema et al.

In order to support an obviousness rejection based on a combination of references, there must be some motivation to make the proposed combination. Any teaching away in the primary reference must be taken into account. In addition, the proposed modification cannot change the principle of operation of the primary reference.

Hachisuka et al. discussed in its background section that prior radios, in discriminating between analog and digital signals, used techniques that took an inordinate amount of time. To overcome this deficiency of the prior art, Hachisuka provides a digital signal detecting circuit 108 and an FM signal detecting circuit 107, which are connected to each other in parallel, as shown in Figure 1. The logic discrimination circuit 111 determines whether the signal received is analog or digital based on a noise component from the FM signal detecting circuit, detected by the noise detecting circuit 109, as well as on the RSSI detecting circuit. In accordance with the discrimination, the output of either the digital signal detecting circuit 108 and an FM signal detecting circuit 107 is supplied to the aural frequency amplifier 113 and the speaker 115 for immediate output.

In Hachisuka, as soon as it is discriminated if the signal is analog (FM) or digital, that signal is immediately passed through to the amplifier and speaker. As was emphasized in the discussion of the prior art, this arrangement is designed for a rapid determination and output of the appropriate signal. It would go completely against the design goals of Hachisuka to add the recited analog modulation type discrimination means, which adds the subsequent step of determining between FM and AM if the signal is determined to be analog. This additional step would change the principle of operation of Hachisuka, which maintains the possible digital signal and analog signal in parallel to allow immediate amplification of the selected type of signal. This immediate amplification, and parallel processing structure would be impossible if the proposed modification were made to the Hachisuka reference.

For at least these reasons, one of ordinary skill in the art would have been dissuaded

from adding any additional processing steps to those outlined in Hachisuka, which would have the effect of negating the very speed for which Hachisuka's device was intended.

For at least the above reasons, the proposed combination is improper and claim 1 is believed clearly patentable over the cited references.

Claim 31 recites that if it is discriminated that the reception signal is a signal of the digital modulation type, then it is discriminated if that signal is of the linear or non-linear type.

No teaching or suggestion has been found in Hachisuka of, for signals that have been discriminated as being of the digital modulation type, further discriminating whether that signal is of the linear or non-linear type. The Examiner has relied upon Nourrcier to remedy this deficiency.

However, this combination is improper for reasons similar to those delineated above with respect to claim 1. That is, in Hachisuka, the parallel structure of the digital signal detecting circuit 108 and FM signal detecting circuit 107 allow for immediate output to the amplifier and speaker of whichever signal is discriminated by the logic discrimination circuit 111. No one would be motivated to slow down the output of the selected signal in Hachisuka by adding an additional step of determining whether the discriminated digital signal is of the linear or non-linear type, in view of the design objectives of the Hachisuka reference. For at least these reasons, the proposed combination is improper.

Accordingly, independent claim 31 is believed to be clearly distinguished from Hachisuka et al.

For similar reasons, no one of ordinary skill in the art would have added the extra steps recited in claim 45 to the Hachisuka reference, in view of the design goals of that reference, as discussed in detail above. For at least this reason, claim 45 is believed clearly

Application No.: 09/659,767

Docket No.: G0126.0189/P189

patentable over the cited references.

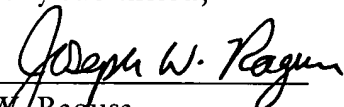
The other claims in this application are each dependent from one or another of the independent claims discussed above and are therefore believed patentable for the same reasons. Since each dependent claim is also deemed to define an additional aspect of the invention, however, the individual reconsideration of the patentability of each on its own merits is respectfully requested.

In view of the foregoing amendments and remarks, Applicants respectfully request favorable reconsideration and early passage to issue of the present application.

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Respectfully submitted,

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